



314 Manuka Road, Kettering
ENVIRONMENTAL MANAGEMENT PLAN

13th April 2026

For Anthony Sullivan - IC21 Design
obo Susan Dodds and Andrew Wells

MAN001



313 Macquarie Street, Hobart Tasmania, 7000

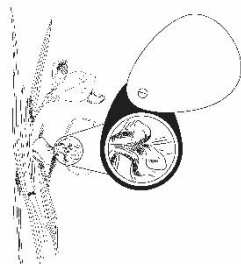
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ACKNOWLEDGEMENTS

Project Name	314 Manuka Road Environmental Management Plan		
Location	314 Manuka Road, Kettering (PID: 5788095)		
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Ultimate client	Susan Dodds and Andrew Wells		
NBES Job Code	MAN001		
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Version	Date	Author & Position	Comment
Version 0.1	08/04/2026	Jessica Binns – Ecologist	Draft report
Version 1.0	13/04/2026	Cameron Geeves – Lead Ecologist	Review and delivery to client



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SUMMARY

Property Details	
Address	315 MANUKA ROAD, KETTERING TAS 7155
Title Reference / PID Number	6441/6 / 5788095
Tasmanian Interim Planning Scheme Zones	Environmental living
Natural Values	
TASVEG vegetation communities	<i>Eucalyptus obliqua</i> dry forest (DOB) Urban areas (FUR) <i>Eucalyptus tenuiramis</i> forest and woodland on sediments (DTO) (Threatened under the NCA 2002)
Threatened flora	Nil
Threatened fauna and fauna habitat	Nil
Weeds and pathogens	Spanish heath (<i>Erica lusitanica</i>) Holly (<i>Ilex aquifolium</i>) Radiata pine (<i>Pinus radiata</i>) Largeleaf cotoneaster (<i>Cotoneaster glaucophyllus</i> var. <i>serotinus</i>)
Geoconservation sites	Nil
Environmental Management Plan	
<p>The Environmental Management Plan (EMP), required under Clause 14.4.5 of the Kingborough Interim Planning Scheme 2015, identifies the study area's natural values and outlines management measures to protect these values including:</p> <ul style="list-style-type: none"> • Unintended impacts to threatened vegetation • Vegetation management and habitat for native animals • Weed and hygiene management • Erosion and sedimentation control 	

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1. INTRODUCTION

1.1. BACKGROUND

North Barker Ecosystem Services has been engaged by IC21 Design to prepare an Environmental Management Plan (EMP) for 314 Manuka Road, Kettering (PID: 5788095) in response to a Request for Information (RFI) issued by Kingborough Council. This plan supports an application for retrospective approval of a proposed shipping container intended for storage use by the property owners.

1.2. STUDY AREA

The study area (Figure 1) (c. 1.9 ha) is located in Kettering township within the Kingborough municipality and is currently zoned as Environmental Living. The shipping container is positioned in the centre of the study area, northeast of the existing dwelling, and is intended to be used as additional storage to the existing dwelling and shed.

1.3. METHODS

The field survey was undertaken on the 7th of April 2026. Native and non-native vegetation types were mapped across the study area in accordance with units defined in TASVEG 5.0¹. A meandering area search was used to record all vascular plant species lists within each vegetation type in accordance with the current census of Tasmanian plants² and to search for threatened flora species³. Additional effort was applied within potential threatened species' habitats and within threatened native vegetation types.

Declared and environmental weeds⁴ were mapped throughout the entire study area with plant numbers and/or area of cover recorded where possible. Observation of habitat suitability for threatened fauna was assessed concurrently to vegetation mapping and flora ground surveys. All location data were recorded with a hand-held GPS.

A 15 m buffer was applied to the shipping container to account for the maximum potential tree Notional Root Zones (NRZ) under the Australina Standard AS4970: 2025 Protection of Trees on Development Sites⁵. NRZ are calculated from trunk diameter – diameter at standard height (DSH) (12 x DSH for single stem tree with a modified formula for multi-stem trees).

1.4. SUPPORTING DOCUMENTS

The following sources were used from the region to supplement field data collected by NBES:

- Tasmanian Natural Values Atlas⁶ – this Department of Natural Resources and Environment, Tasmania (NRE) database includes biological records
- TASVEG 5.0⁷ (and TASVEG Live) digital data – this layer has been field-truthed during ground surveys
- Threatened Species Link⁸ – this NRE database provides listing advice and descriptions of threatened flora and fauna
- Land Information System Tasmania (LIST)⁹ – municipality, tenure, reservation status
- Tasmanian Geoconservation Database¹⁰

¹ Department of Natural Resources and Environment Tasmania (2025)

² de Salas & Baker (2025)

³ Goff *et al.* (1982)

⁴ Tasmanian State Government (2019)

⁵ EV-018 (Arboriculture) (2025)

⁶ Department of Natural Resources and Environment (2026)

⁷ Department of Natural Resources and Environment Tasmania (2025)

⁸ Accessible via: <https://www.threatenedspecieslink.tas.gov.au>

⁹ Land Information System Tasmania (2026)

¹⁰ Department of Natural Resources and Environment (2025)

1.5. LIMITATIONS

The survey was undertaken in April. Natural values that are seasonal may have been overlooked or absent. Due to seasonal variations in detectability and accurate discrimination (*i.e.* identification of closely related species), there may be some herb, orchid and/or graminoid species present that have been overlooked due to flowering at times of the year other than when the surveys were undertaken or being absent at the time of surveys due to seasonality and/or the absence of requisite germination triggers.

Fauna habitat, including the presence of hollows and nests, was assessed from ground level only

To compensate for these limitations, information from the survey is supplemented with data from online repositories of natural values outlined in Section 1.4.

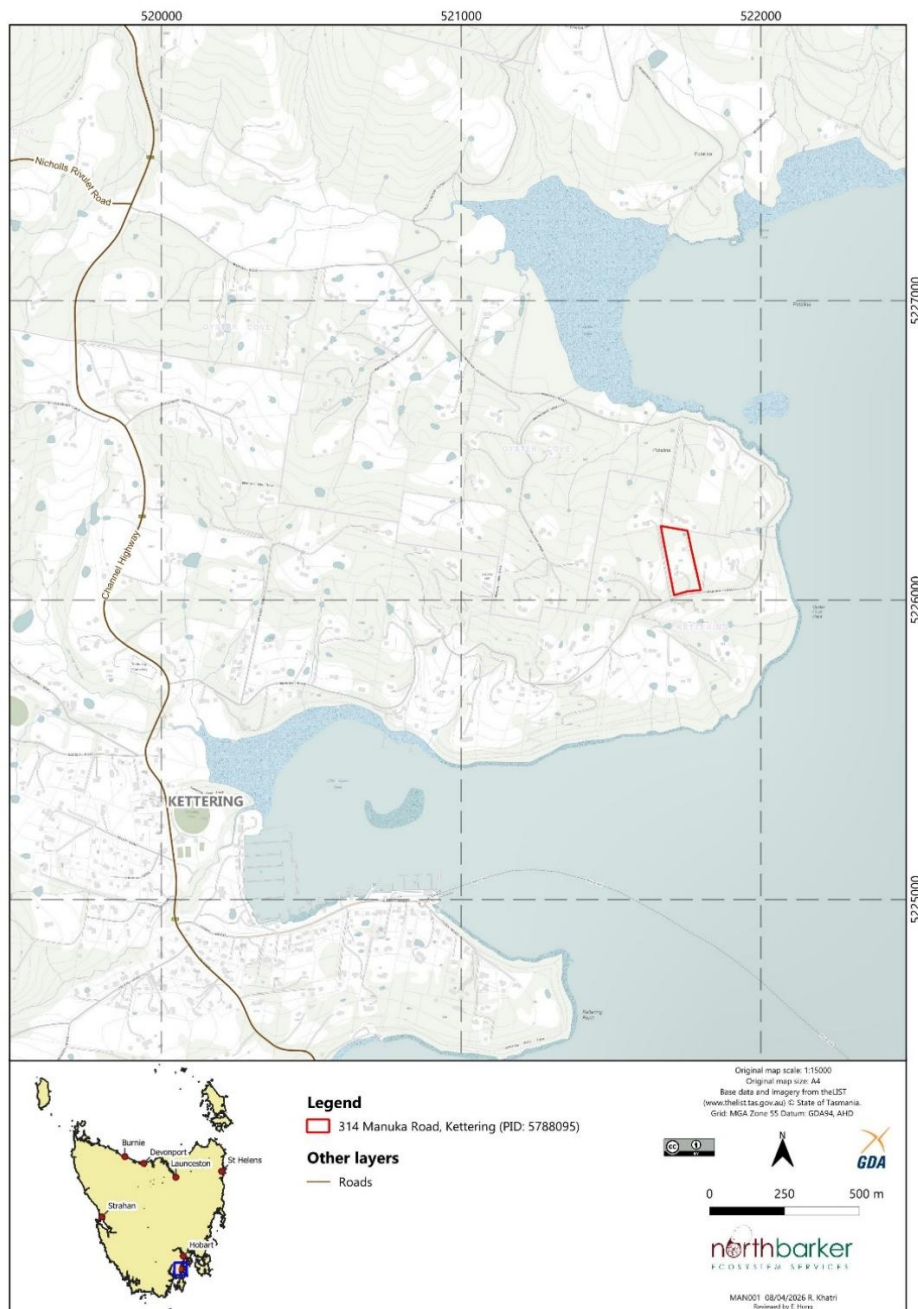


Figure 1. Location of the study area

2. RESULTS AND IMPACT ASSESSMENT

2.1. VEGETATION COMMUNITIES

Two native vegetation communities were recorded within the study area:

- *Eucalyptus obliqua* dry forest (TASVEG: DOB) (0.10 ha)
- *Eucalyptus tenuiramis* forest and woodland on sediments (TASVEG: DTO) (0.8 ha)

DTO is listed as threatened under the Tasmanian *Nature Conservation Act (2002)*.

One modified land unit was also recorded in the study area:

- Urban areas (TASVEG: FUR) (1.10 ha)

The distribution of these three TASVEG vegetation mapping units within the study is illustrated in Figure 2. Importantly, it is noted that the placement of the shipping container is within modified land (TASVEG: FUR) on the property and no impacts to surrounding native vegetation mapped within the property has occurred.

2.2. CONSERVATION SIGNIFICANT FLORA

Fifty-four vascular plant species were recorded within the study area during the survey, including ten non-native species (Appendix A).

No flora species list as threatened under the Tasmanian *Threatened Species Protection Act (1995)* or Federal *Environmental Protection and Biodiversity Conservation Act (1999)* were recorded during the survey, nor are any likely to occur that are seasonally absent within the FUR vegetation at the site of the shipping container.

2.3. CONSERVATION SIGNIFICANT FAUNA

No incidental observations of threatened fauna was made during the survey, and no significant habitat or foraging trees were recorded across the study area.

No other fauna habitat or signs of fauna were recorded within the study area.

2.4. INTRODUCED PLANTS AND PATHOGENS

Two declared weed species were recorded within the study area:

- Spanish heath (*Erica lusitanica*) - It is noted that Spanish heath does occur in generally large numbers on the property including in close proximity of the location of the shipping container and therefore there is some risk that works associated with its delivery/placement may result in the spread of this species on the property. It is acknowledged that the landowner is aware of the species and actively treating its occurrence on the property (Plates 1 and 2).
- holly (*Ilex aquifolium*)

In addition, two environmental weed species were recorded within the study area:

- radiata pine (*Pinus radiata*)
- largeleaf cotoneaster (*Cotoneaster glaucophyllus* var. *serotinus*)

2.5. GEOCONSERVATION

There are no geoconservation sites listed on the Tasmanian Geoconservation Database are present within the study area and the nearest site – the Cygnet Cretaceous Alkaline Complex – is 2.8 km to the southwest.



Plate 1: Spanish heath infestation being currently managed on the property – shipping container in background.



Plate 2. Spanish heath infestation being currently managed at property boundary.

3. ENVIRONMENTAL MANAGEMENT PLAN

This Environmental Management Plan (EMP) (Table 1) has been prepared to satisfy Clause 14.4.5 of the Kingborough Interim Planning Scheme 2015. The purpose of the EMP is to identify and document the natural values across the study area, including native vegetation communities, threatened species, and habitat for local fauna, and to outline appropriate management measures to ensure their ongoing protection. This EMP has been developed retrospectively following the placement of a shipping container on the site. Based on site observations, the installation of the container and associated access did not result in any impacts to native vegetation, threatened vegetation communities, or fauna habitat. Notably, the existing gravel driveway provided adequate access, and no vegetation clearance or significant disturbance was required.

The EMP provides a framework to guide the ongoing management of the site to ensure that environmental values are maintained and enhanced over time. It should be read in conjunction with the accompanying EMP map (Figure 2), which illustrates the location of natural values on the property and relevant management considerations. The EMP also recognises the landowner's ongoing revegetation efforts across the site, which have contributed positively to the restoration and enhancement of native vegetation and habitat values.

Table 1. 314 Manuka Road Environmental Management Plan.

Issue	Explanation	Strategies	Responsible party
Unintended impacts to threatened vegetation	A threatened vegetation community (DTO) occurs in proximity to the existing access driveway. The delivery and placement of the shipping container utilised this established access and did not result in any observed impacts to the vegetation community.	<ul style="list-style-type: none"> If additional works are proposed, they should be planned to avoid impacts to native vegetation (DTO and DOB) on the property. Any future access or works are to utilise established disturbed areas only. 	Landowner
Vegetation management and habitat for native animals	The placement of the shipping container did not require native vegetation clearance and did not result in the loss or degradation of fauna habitat. Native vegetation and habitat features across the property remain intact.	<ul style="list-style-type: none"> Retain existing native vegetation and habitat features, including trees, logs, and understorey vegetation. Continue revegetation and habitat restoration efforts where practicable. 	Landowner
Weed and hygiene management	<p>No new weed infestations or spread of existing weeds were observed as a result of the works. However, ongoing management is required to maintain site condition and prevent future spread of the existing weeds identified on the property.</p> <p>Spanish heath (<i>Erica lusitanica</i>), a declared weed, was identified in close proximity to the shipping container (Figure 2). Within the Kingborough municipal area, Spanish heath is classified as a Class B species under the Tasmanian <i>Biosecurity Act 2019</i>, requiring landowners to take reasonable measures to control and contain its spread.</p> <p>The placement of the container did not result in any observed spread of this species; however, its presence poses an ongoing risk to native vegetation values. It is acknowledged that the species is being actively managed on the property (see Plate 1 above).</p>	<p>The client may wish to engage a suitably qualified person to develop a site-specific Weed and Hygiene Management Plan (WHMP) to inform the following actions:</p> <ul style="list-style-type: none"> Develop and implement targeted control of Spanish heath on the property (Figure 2), using appropriate methods (e.g. cut-and-paint or foliar spray) undertaken by a suitably qualified person. Monitor treated areas and undertake follow-up control to ensure effective eradication and prevent regrowth. Avoid soil disturbance in infested areas where practicable to minimise the risk of further spread. Ensure any future machinery or vehicles entering the site are clean and free of soil and vegetative material to prevent the introduction or spread of weeds. Continue broader site monitoring for declared and environmental weeds, with control measures implemented as required. <p>Apply the following Tasmanian hygiene guidelines as best practice for any future works as follows:</p> <ul style="list-style-type: none"> <i>Keeping it clean – A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens</i>¹¹ <i>Tasmanian Washdown Guidelines for Weed and Disease Control. Machinery, Vehicles & Equipment</i>¹² <i>Weed and Disease Planning and Hygiene Guidelines – Preventing the spread of weeds and diseases in Tasmania</i>¹³ 	Landowner
Erosion and sedimentation control	The use of the existing gravel driveway for delivery did not result in erosion or sedimentation impacts. The site remains stable, with no evidence of soil disturbance or sediment transport.	<ul style="list-style-type: none"> Maintain the existing driveway in a stable condition to prevent erosion. Avoid disturbance to soil and vegetation outside established access area. Implement appropriate erosion and sediment control measures if any future ground disturbance is proposed. 	Landowner

¹¹ Allan & Gartenstein (2010)

¹² Department of Primary Industries, Parks, Water and Environment (2004)

¹³ Department of Primary Industries, Parks, Water and Environment (2015)



- Legend**
- 314 Manuka Road, Kettering (PID: 5788095)
 - 15 m buffer from shipping container
- Design**
- Car park
 - Existing dwelling
 - Existing gravel driveway
 - Existing shed
 - Existing shipping container
 - W Existing water tank
- Other layers**
- Roads

- Vegetation – TASVEG 5.0 mapping units**
- Listing status – [NCA/EPBCA]**
- (DOB) Eucalyptus obliqua dry forest
 - (FUR) Urban areas
- Threatened vegetation community**
- (DTO) Eucalyptus tenuiramis forest and woodland on sediments [t/-]
(to be avoided from impacts under any future design on the property)
- Weed records**
(Labelled with code and: abundance if >1, count error, area in m² and cover % where applicable)
- Declared weeds (to be considered for removal as a part of a site-specific Weed and Hygiene Management Plan)**
- + h - holly [Declared]
 - + sh - Spanish heath [Declared]
 - + sh - Spanish heath [Declared]
- Environmental weeds**
- + lco - largeleaf cotoneaster [Environmental]
 - + rp - radiata pine [Environmental]
 - + lco - largeleaf cotoneaster [Environmental]
 - + rp - radiata pine [Environmental]

Original map scale: 1:850
Original map size: A3
Base data and imagery from theLIST
(www.thelist.tas.gov.au) © State of Tasmania.
Grid: MGA Zone 55 Datum: GDA94, AHD

0 20 40 m

State schedule	National schedule
NC Act 2002	EPBC Act 1999
t - threatened	CR - critically endangered
	EN - endangered
	VU - vulnerable

MAN001 13/04/2026 R. Khatri
Reviewed by E. Hong

The mapping has been undertaken using a hand held GPS and subjective interpretation. Consequently it should be considered indicative only.

Figure 2.Environmental Management Plan for 314 Manuka Road, Kettering.

REFERENCES

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- Land Information System Tasmania (2026). LISTmap – Land Information System Tasmania [Data set]. Online.
- Tasmanian State Government (2019). Biosecurity Act 2019 (No. 20 of 2019). Government Printer.

APPENDIX A – VASCULAR PLANT SPECIES LIST

Status codes:

ORIGIN	NATIONAL SCHEDULE	STATE SCHEDULE
i - introduced	EPBC Act 1999	TSP Act 1995
d - declared weed WM Act	CR - critically endangered	e - endangered
en - endemic to Tasmania	EN - endangered	v - vulnerable
t - within Australia, occurs only in Tas.	VU - vulnerable	r - rare

Sites:

1	DOB - Eucalyptus obliqua dry forest - E521677, N5226218	7/04/2026 Jess Binns
2	DTO - Eucalyptus tenuiramis forest and woodland on sediments - E521723, N5226221	7/04/2026 Jess Binns
3	FUR - Urban areas - E521725, N5226193	7/04/2026 Jess Binns

Site	Name	Common name	Status
	DICOTYLEDONAE		
	ACERACEAE		
2	<i>Acer pseudoplatanus</i>	sycamore maple	i
	APIACEAE		
3	<i>Hydrocotyle hirta</i>	hairy pennywort	
	AQUIFOLIACEAE		
2	<i>Ilex aquifolium</i>	holly	d
	ASTERACEAE		
2	<i>Cassinia aculeata subsp. aculeata</i>	dollybush	
3	<i>Cirsium vulgare</i>	spear thistle	i
3	<i>Hypochaeris radicata</i>	rough catsear	i
1 2 3	<i>Lagenophora stipitata</i>	blue bottledaisy	
2	<i>Olearia ramulosa</i>	twiggy daisybush	
3	<i>Senecio sp.</i>	groundsel	
	BETULACEAE		
3	<i>Betula pendula</i>	silver birch	i
	CONVOLVULACEAE		
3	<i>Dichondra repens</i>	kidneyweed	
	ERICACEAE		
2	<i>Epacris impressa</i>	common heath	
3	<i>Erica lusitanica</i>	Spanish heath	d
1 2	<i>Styphelia humifusa</i>	native cranberry	
	FABACEAE		
2 3	<i>Acacia dealbata subsp. dealbata</i>	silver wattle	
3	<i>Acacia melanoxylon</i>	blackwood	
3	<i>Acacia riceana</i>	arching wattle	en

2	<i>Acacia stricta</i>	hop wattle	
2	<i>Acacia terminalis</i>	sunshine wattle	
2	<i>Oxylobium ellipticum</i>	golden shaggypea	
GENTIANACEAE			
3	<i>Centaurium erythraea</i>	common centaury	i
HALORAGACEAE			
1	<i>Gonocarpus tetragynus</i>	common raspwort	
MYRTACEAE			
3	<i>Corymbia ficifolia</i>	red flowering gum	i
1 2 3	<i>Eucalyptus obliqua</i>	stringybark	
2	<i>Eucalyptus sp.</i>	gum	
1 2 3	<i>Eucalyptus tenuiramis</i>	silver peppermint	en
1 2 3	<i>Leptospermum scoparium</i>	common tea-tree	
2 3	<i>Melaleuca pallida</i>	yellow bottlebrush	
PROTEACEAE			
2	<i>Banksia marginata</i>	silver banksia	
RHAMNACEAE			
2	<i>Pomaderris apetala</i>	common dogwood	
3	<i>Pomaderris elliptica</i>	yellow dogwood	
ROSACEAE			
2 3	<i>Acaena novae-zelandiae</i>	common buzzy	
2 3	<i>Cotoneaster glaucophyllus var. serotinus</i>	largeleaf cotoneaster	i
RUBIACEAE			
1	<i>Coprosma quadrifida</i>	native currant	
SANTALACEAE			
1 2 3	<i>Exocarpos cupressiformis</i>	common native-cherry	
1 2	<i>Leptomeria drupacea</i>	erect currantbush	
SOLANACEAE			
2 3	<i>Solanum laciniatum</i>	kangaroo apple	
GYMNOSPERMAE			
PINACEAE			
1 2 3	<i>Pinus radiata</i>	radiata pine	i
MONOCOTYLEDONAE			
ASPARAGACEAE			
3	<i>Lomandra longifolia</i>	sagg	
CYPERACEAE			
2	<i>Carex appressa</i>	tall sedge	
1 3	<i>Gahnia radula</i>	thatch sawsedge	
HEMEROCALLIDACEAE			
2	<i>Dianella revoluta</i>	spreading flaxlily	

IRIDACEAE			
2	<i>Diplarrena moraea</i>	white flag-iris	
JUNCACEAE			
3	<i>Juncus pallidus</i>	pale rush	
2 3	<i>Juncus procerus</i>	tall rush	
POACEAE			
3	<i>Aira praecox</i>	early hairgrass	i
3	<i>Anthoxanthum odoratum</i>	sweet vernalgrass	i
2	<i>Poa labillardierei</i>	silver tussockgrass	
2	<i>Poa sp.</i>	poa	
1 2 3	<i>Rytidosperma sp.</i>	wallabygrass	
2 3	<i>Tetrarrhena disticophylla</i>	hairy rice-grass	
RESTIONACEAE			
2	<i>Leptocarpus tenax</i>	slender twinerush	
PTERIDOPHYTA			
DENNSTAEDTIACEAE			
1 2 3	<i>Pteridium esculentum subsp. esculentum</i>	bracken	
GLEICHENIACEAE			
2	<i>Gleichenia dicarpa</i>	pouched coralfern	